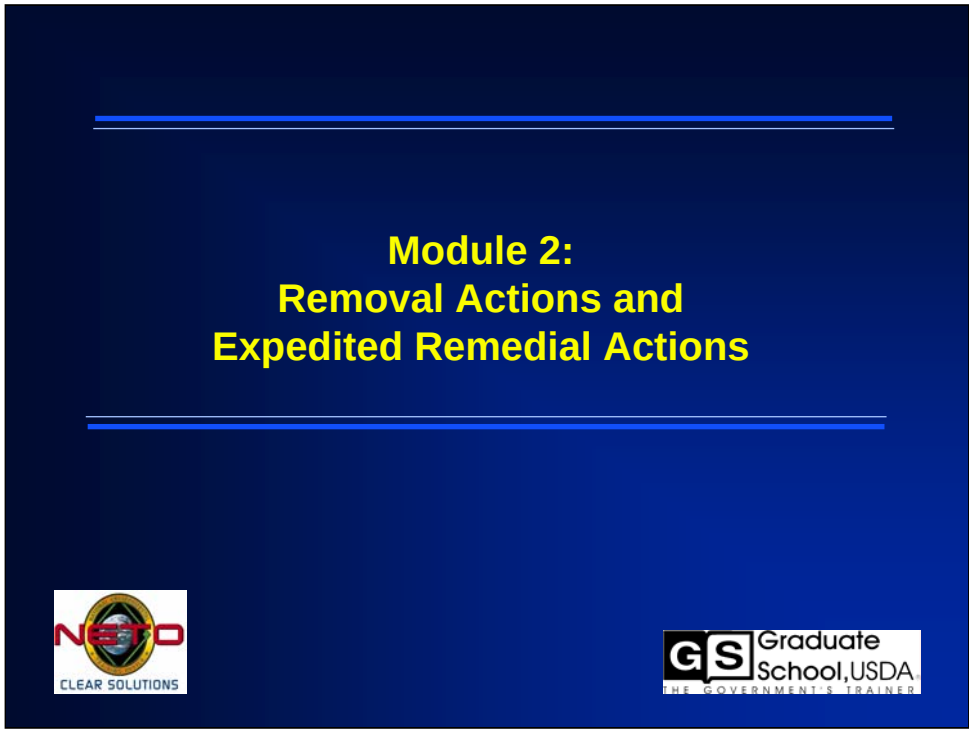

- This section of the course discusses removal actions and expedited remedial actions, including types and key features of these actions.

Module Objectives

- Identify the three kinds of removal actions
- Explain the relationship between the removal program and DOE's decommissioning policy under CERCLA
- Identify the two types of expedited remedial actions
- Identify how removal actions and expedited remedial actions must conform with the overall long-term remedial process
- Indicate where, in the CERCLA long-term remedial program, removal actions and expedited remedial actions can occur

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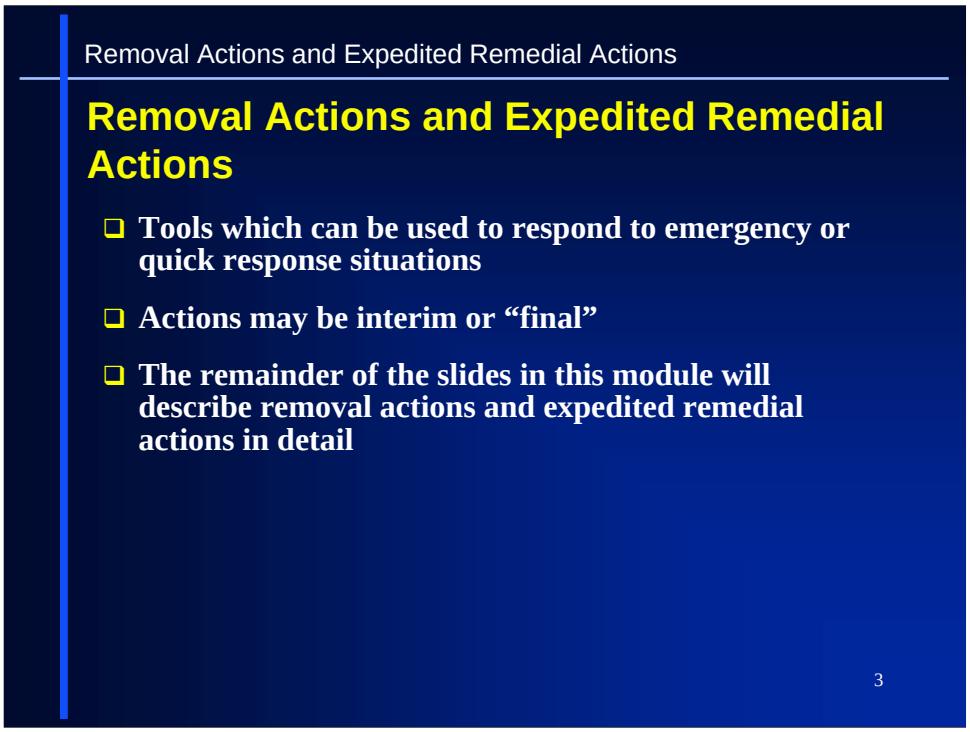
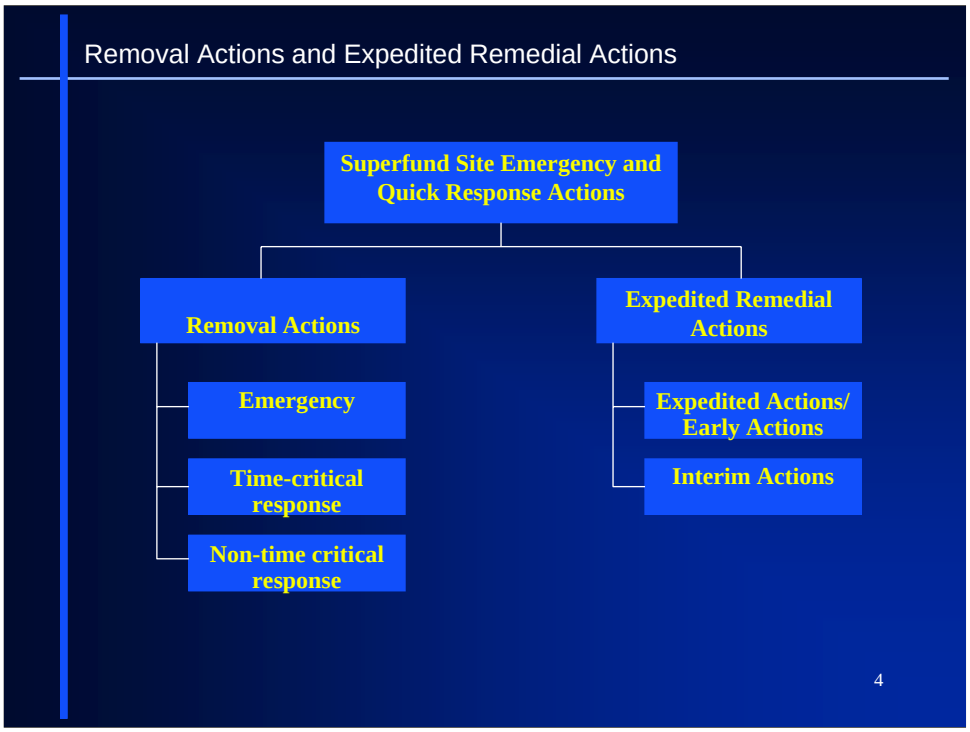
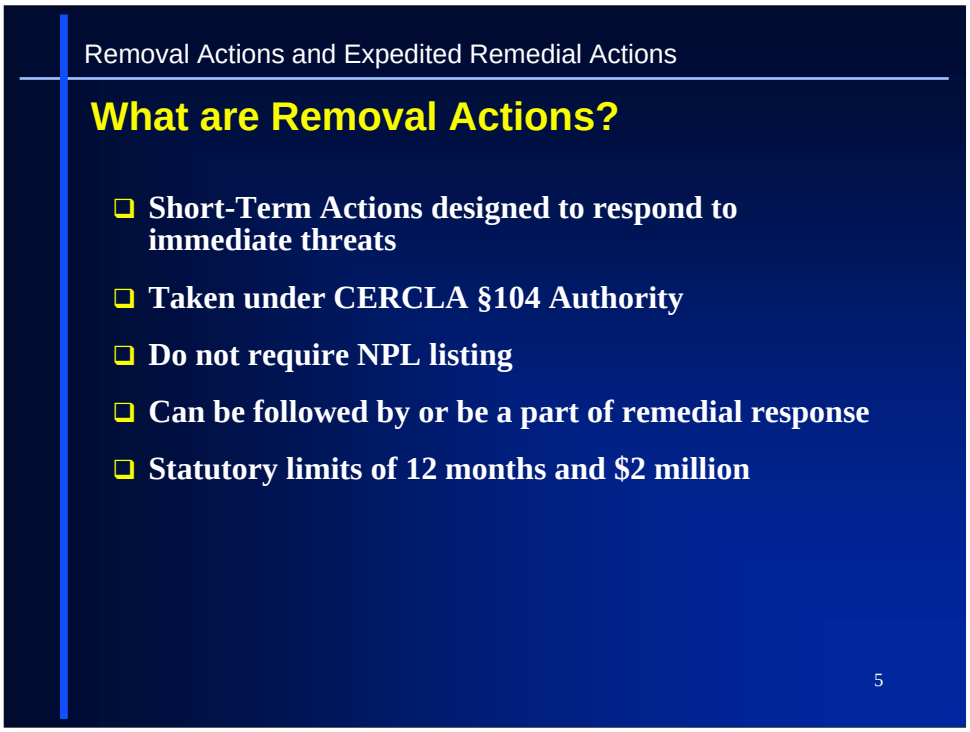


- Key references for removal actions include:
  - National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 55 FR 8666, March 8, 1990 and 40 CFR Part 300, particularly 40 CFR 300.410 and 300.415.
  - Superfund Removal Procedures Manual -- This EPA manual consists of 10 volumes of guidance documents, each presenting a particular aspect of the removal process.
    - -- *Action Memorandum Guidance*, December 1990, OSWER Directive 9360.3-01, NTIS# PB90-274473.
    - -- *Guidance on the Consideration of ARARs During Removal Actions*, August 1991, OSWER Directive 9360.3-02, NTIS# PB92-963401.
    - -- *Removal Enforcement Guidance for On-Scene Coordinators*, April 1992, OSWER Directive 9360.3-06.
- Key references for expedited remedial actions include:
  - Preamble to the *National Oil and Hazardous Substances Pollution Contingency Plan*, 55 FR 8703 - 8707, March 8, 1990.
  - *Guide to Developing Superfund No Action, Interim Action, and Contingency Remedy RODs*, EPA, OSWER Publication 9355.3-02FS-3, April 1991.



- Available quick response actions come in two types: removal and remedial, and under each several different options are possible depending on site circumstances.

- Each will be explored further later in the module



- "Removal" is defined in CERCLA section 101(23) and in the NCP at 55 FR 8818.

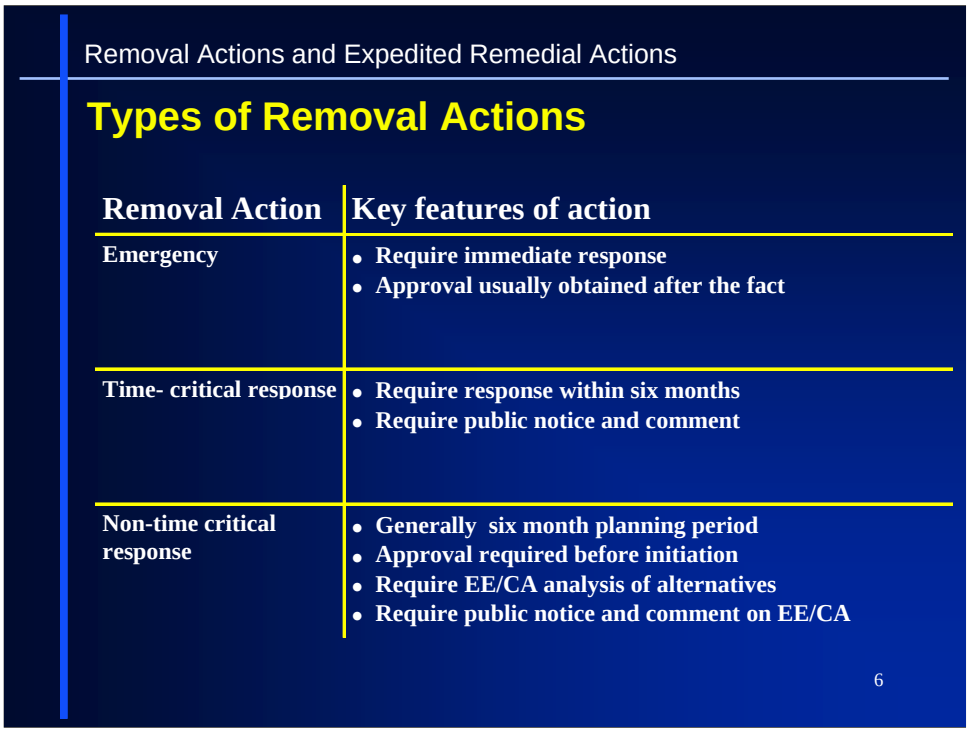
Remove or removal means the cleanup or removal of released hazardous substances from the environment; such actions as may be necessary taken in the event of the threat of release of hazardous substances into the environment; such actions as may be necessary to monitor, assess, and evaluate the release or threat of release of hazardous substances; the disposal of removed material; or the taking of such other actions as may be necessary to prevent, minimize, or mitigate damage to the public health or welfare or to the environment, which may otherwise result from a release or threat of release. (NCP)

- Removal actions must, to the extent practicable, contribute to the efficient performance of any long-term remedial action for the release (55 FR 8843 and CERCLA section 104(b)). (This provision is discussed further in OSWER Directive 9360.0-13, April 6, 1987.)

- The major objective of this requirement is to provide maximum protection of public health and the environment at minimal cost by avoidance of removal restarts, especially restarts that are due to recurring threats that were not adequately addressed in the original removal action and threats from deteriorating site conditions that should have been foreseen. Response personnel should consider the following questions:

  - What is the long-term cleanup plan for the site?
  - Which threats will require attention prior to the start of the long-term action?
  - How far should the removal action go to ensure that the threats are adequately abated?
  - Is the proposed removal action consistent with the long-term remedy?

Consideration of these questions, however, may not be possible in an emergency situation.

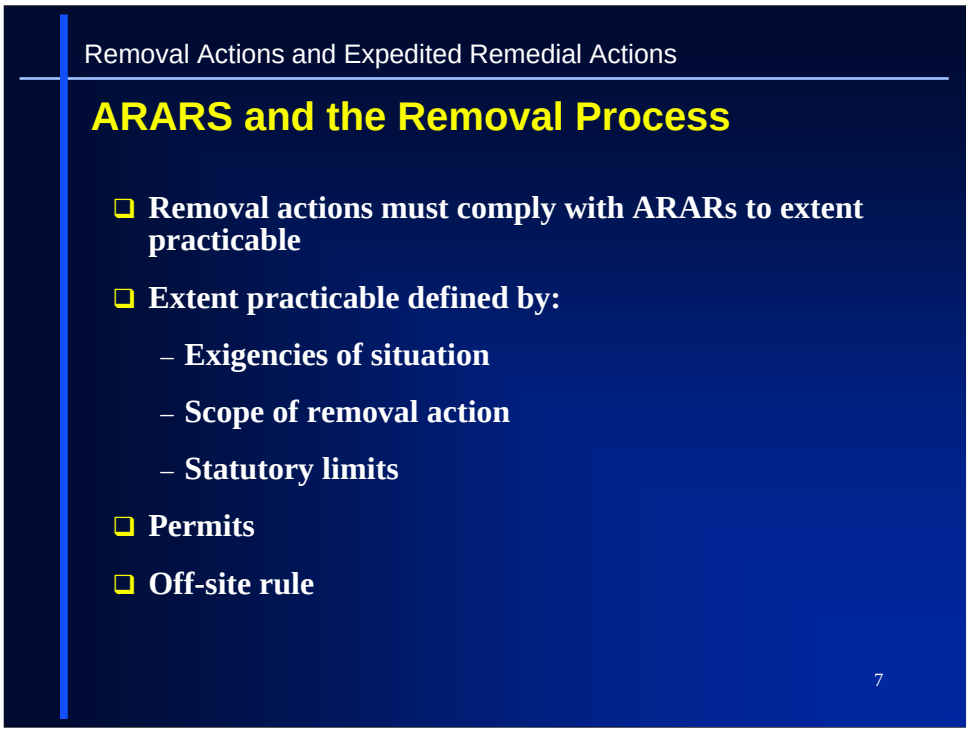


- Examples of removal actions:
  - Fences, warning signs, or other security or site control measures
  - Drainage controls (e.g., run-off or run-on diversion)
  - Stabilization of berms, dikes, or impoundments or drainage or closing of lagoons
  - Capping of contaminated soils
  - Use of chemicals to reduce the spread of a release
  - Excavation of highly contaminated soils
  - Removal of drums and other containers

- Federal facilities can incorporate these into agreements and site-specific plans, as well as use them as needed during response activities.

- Factors to be considered in determining the appropriateness of a removal action (55 FR 8842):
  - Actual or potential exposure to nearby human populations, animals, or the food chain
  - Actual or potential contamination of drinking water supplies or sensitive ecosystems
  - Contaminants in drums or other containers that may pose a threat of release
  - High levels of contaminants in soils largely at or near the surface that may migrate
  - Weather conditions that may cause contaminants to migrate or be released
  - Threat of fire or explosion
  - Availability of other appropriate Federal or state response mechanisms to respond to the release
  - Other situations or factors that may pose threats to public health or welfare or the environment

- For non-time critical removal actions, the site manager must prepare an Engineering Evaluation/Cost Analysis (EE/CA). The goals of the EE/CA are to: 1) satisfy environmental review requirements for removal actions; 2) satisfy administrative record requirements for improved documentation of removal action selection; and 3) provide a framework for evaluating and selecting alternative technologies.



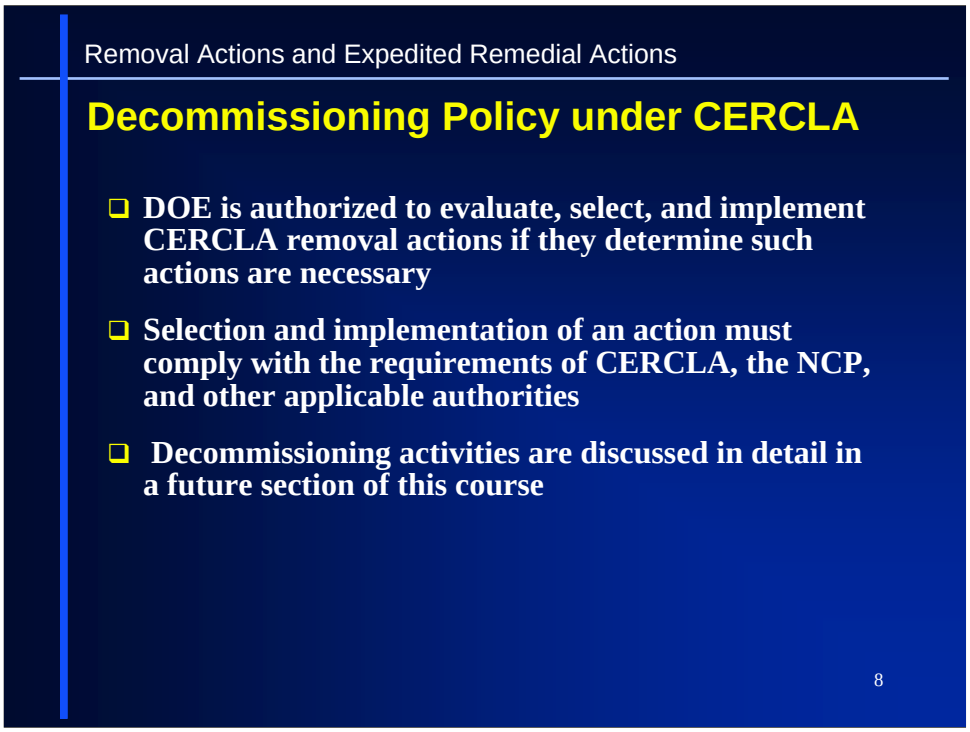
- For emergency removal actions, site managers should not delay response in order to identify potential ARARs. Once immediate threats have been averted, they should identify and consider ARARs for remaining actions.

- For time-critical removal actions, the urgency of the situation will determine how quickly and thoroughly the site manager identifies potential ARARs. In most cases, the site manager could identify ARARs concurrently with the initiation of site cleanup.

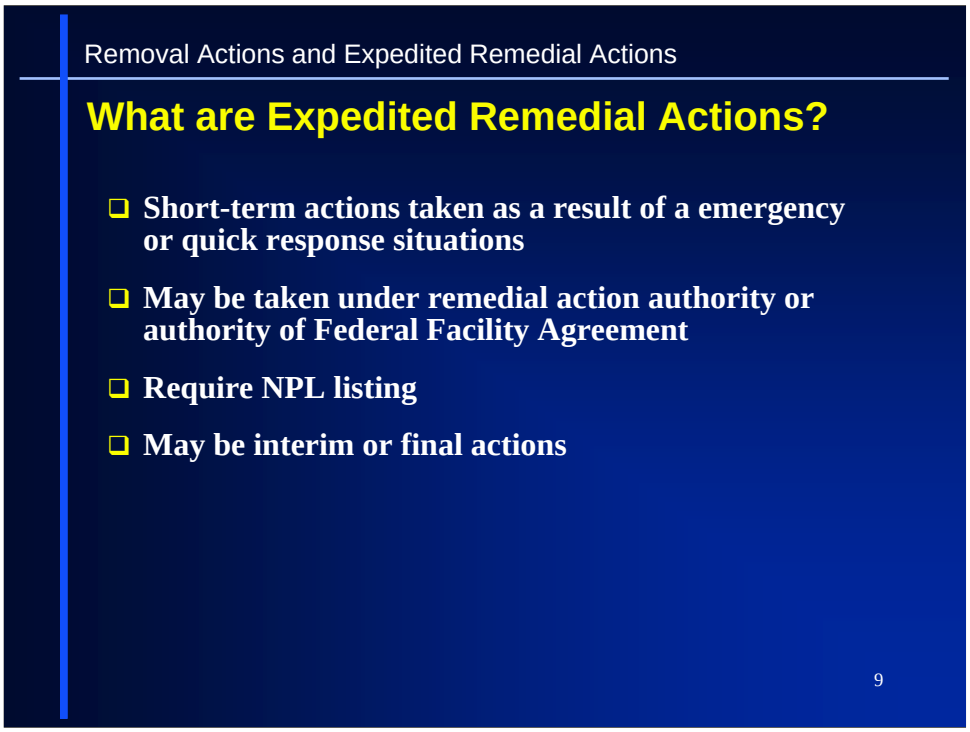
- For non-time-critical removal actions, preparing the Engineering Evaluation/Cost Analysis should allow site managers to consider ARARs in developing the response action.

- Permits are not necessary as part of removal actions.

- According to the off-site rule, wastes from CERCLA removal actions may be transferred off site only to facilities that meet the following criteria: 1) The facility has no significant violations, 2) The facility has no releases of hazardous substances and 3) If the facility has had a significant release of a hazardous substance, the release must be controlled by an enforceable agreement for corrective action under an applicable state or federal authority. The off-site rule promulgated in the Federal Register on September 22, 1993 (58 FR 49200), amended the NCP by adding 40 CFR §300.440. The September 22,1993 rule supersedes any previous guidance on the off-site policy.



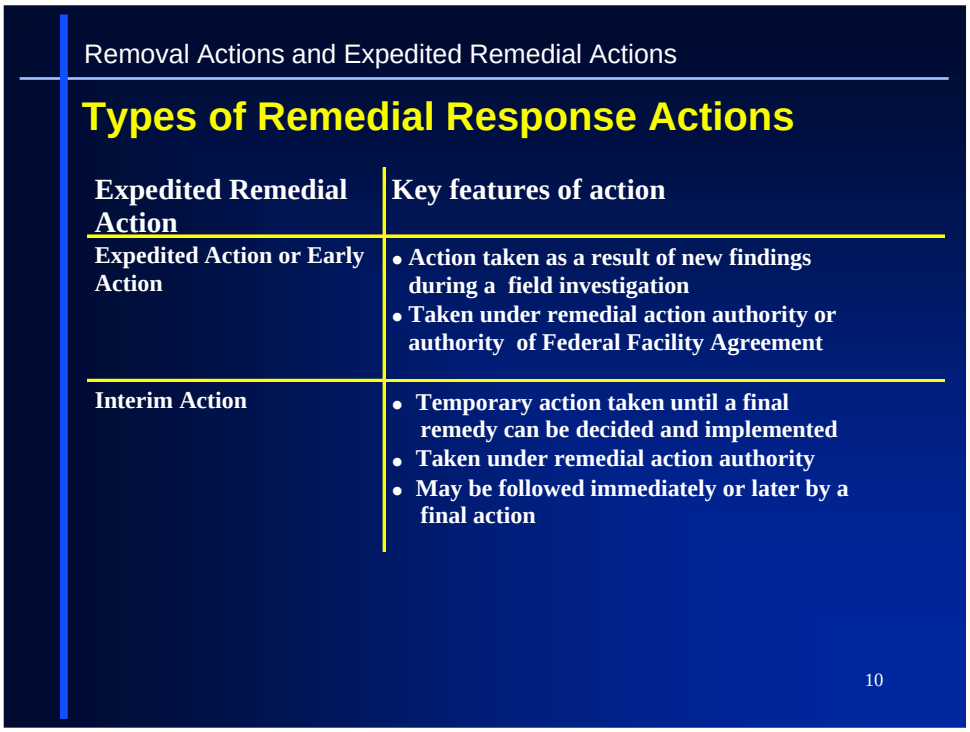
- Principal objectives of the DOE's decommissioning policy are to ensure that decommissioning activities are:
  - protective of worker and public health and the environment,
  - consistent with CERCLA and, where applicable, the Resource Conservation and Recovery Act (RCRA),
  - ensure stakeholder involvement, and
  - achieve risk reduction without unnecessary delay
- This policy endorses the use of removal action authority to conduct decommissioning, although DOE and EPA recognize that removal action will not necessarily be the final response action needed at a facility subject to decommissioning.
- *Policy on Decommissioning of Department of Energy Facilities Under the Comprehensive Environmental response, Compensation, and Liability Act (CERCLA).* DOE, May 1995



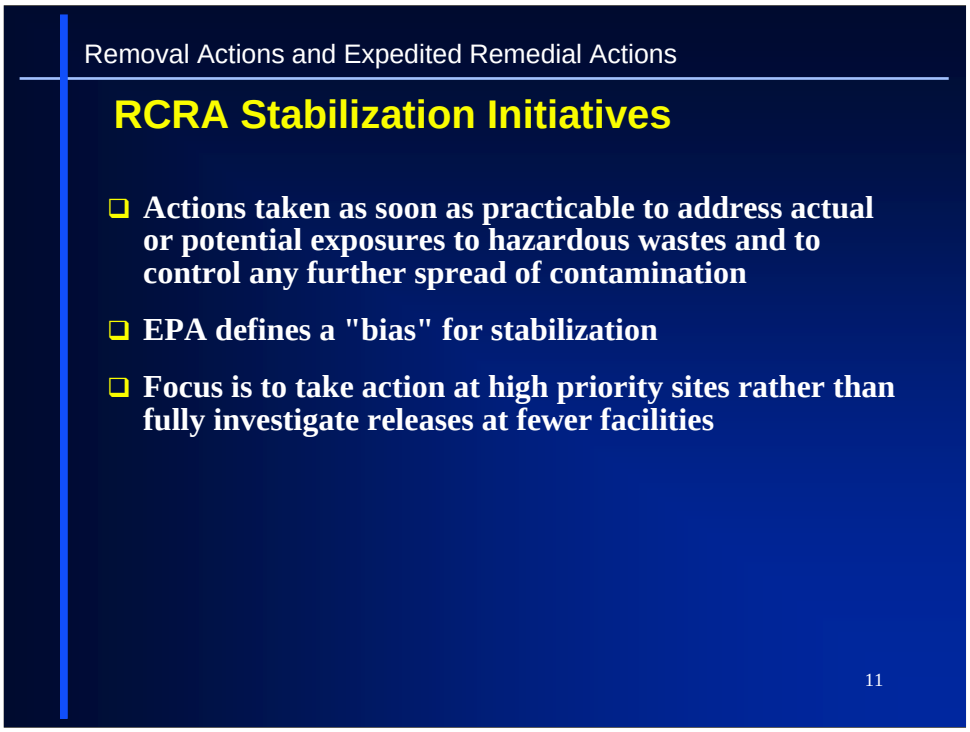
- Depending on the use of removal authority and site specific agreements, expedited remedial actions may be a preferred option.

- Generally are reserved for NPL sites (because non-NPL sites are using RCRA corrective action as the basis for cleanup).

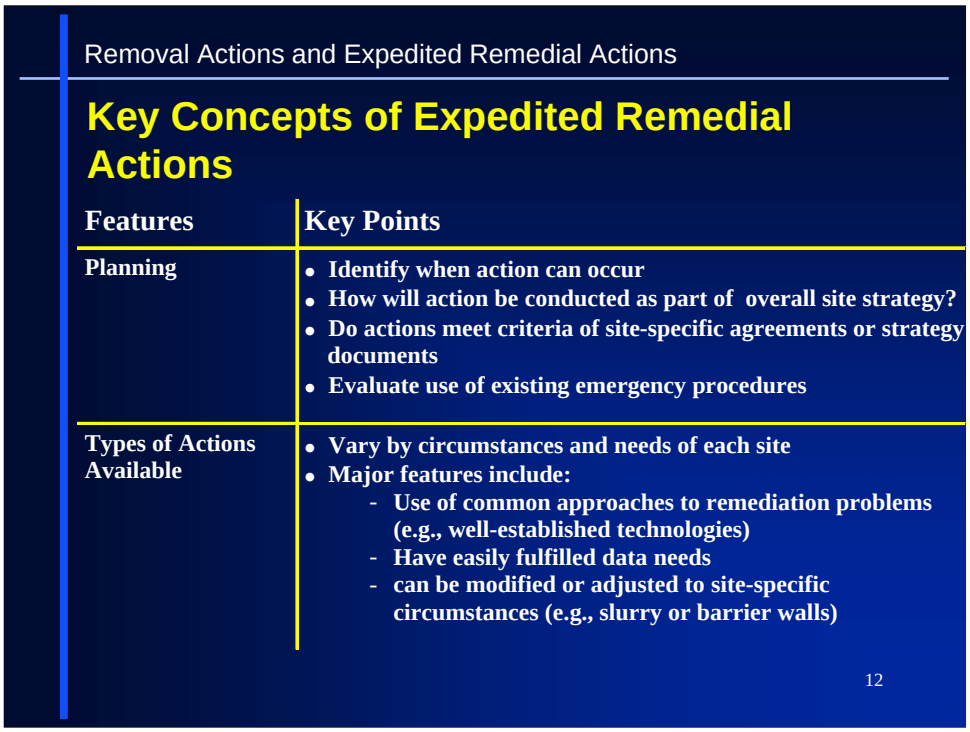
- Those actions may completely remediate a problem (removal of hot spots) or require further action later.



- These actions could be considered removal actions if they are taken before RI/FS activities begin.
- "Early" implies before a full RI/FS is completed and a ROD is signed. Early actions still require decision documentation to be approved, but it will not be as extensive as a full ROD. Early actions using remedial authorities may be initiated as separate operable units.
- Early actions may be either interim or final.
- An early final action might involve the complete removal of drums and a limited amount of surrounding contaminated soil that, without early attention, could result in contamination of currently contaminated areas. This action is "final" because the contamination is completely removed and will not have to be addressed further.
- Interim actions (sometimes called "stabilization" actions if taken under RCRA authority) "buy time" for the lead agency to conduct the RI and develop final remedial alternatives, while reducing the risk to human health and the environment. They are, by definition, followed by a final action.
- Additional examples of interim actions:
  - Providing a temporary alternate drinking water source with the intention of later, in a subsequent action, remediating the source of contamination and/or the aquifer.
  - Constructing a temporary cap to control or reduce exposures until a subsequent action is taken.
  - Relocating contaminated material from one area of a site (e.g., residential yards) to another area for temporary storage until a decision on how to manage the wastes is made. (Note: This interim action (i.e., for temporary storage) also could contain a final action component if the excavated area will not require further remediation.)

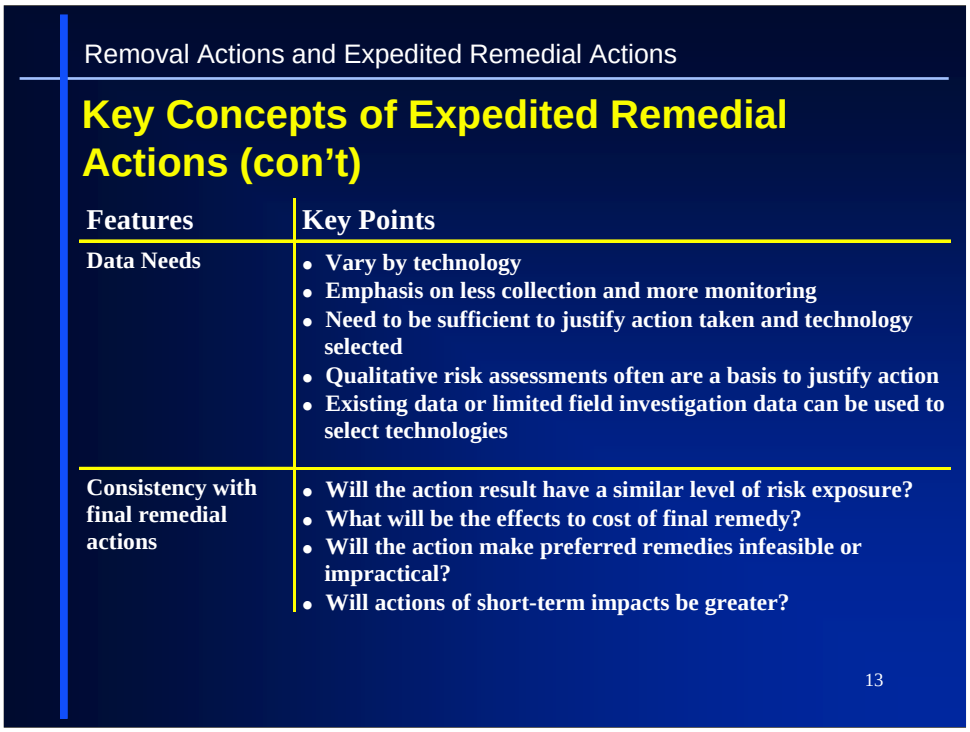


- Many DOE sites also rely on RCRA corrective action authorities to complement actions under CERCLA.
- The RCRA corrective action program has established a stabilization initiative to take early action at corrective action sites where final cleanup may take many years.
- A “bias for stabilization” is actions necessary to reach EPA’s RCRA corrective action environmental indicators, which define in terms of immediate risk-reduction activities its goals for 2005 under the Government Performance and Results Act (GARA).
- This initiative recognizes that, in some cases, the cost and complexity of cleaning up the contamination may rise dramatically if the contamination is not addressed as soon as possible. For example, chemicals may migrate from soil to groundwater.
- Types of activities are similar to CERCLA actions.

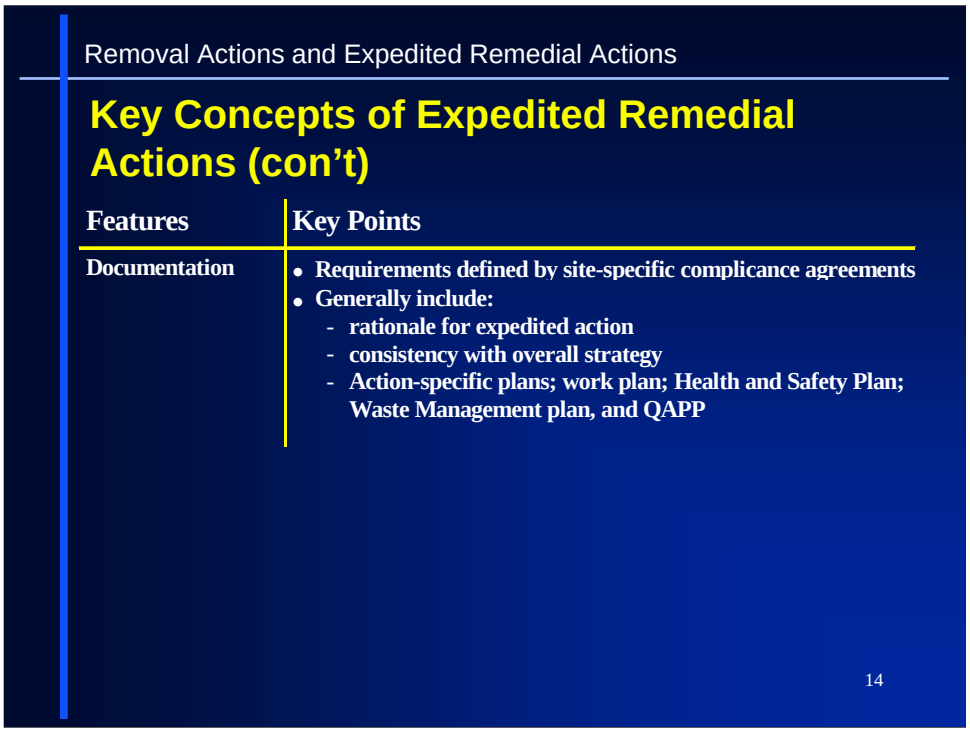


- Expedited and early actions can occur at several points in the RI/FS process. Therefore, planning when these actions occur is very important.

- At DOE sites, overall strategy documents, site-planning documents, and compliance agreements may be part of identifying the timing of early actions.



- Use of field analysis can shorten the timeframe and save RI costs.
- Data to support an interim action should be extracted from the RI/FS that is underway for the site or final operable unit, and an appropriate set of alternatives should be evaluated. Few alternatives, and in some cases only one, should be developed for interim actions.
- A completed baseline risk assessment generally will not be available or necessary to justify an interim action. Qualitative risk information should be organized that demonstrates that the action is necessary to stabilize the site, prevent further degradation, or achieve significant risk reduction quickly.
- Residual risks should meet anticipated ARARs.
- *Will the action add significantly to costs of the final remedy?* For example, a cap constructed for an interim action could add to the cost of the final remedy if it must be reexcavated.
- *Will the action make preferred remedies infeasible or impractical?* For example, in-situ vitrification would eliminate soil washing.
- *Will the action involve short-term impacts greater than long-term risks of no action*? For example, if an interim action involves high risks to workers from contact, the risks of the interim action may be greater than the risks of no action.



- Although preparation of an RI/FS report is not required for an interim action, for the purpose of fulfilling the NCP's Administrative Record requirements, there must be documentation that supports the rationale for the action.

- Documentation is discussed further in *Guide to Developing Superfund No Action, Interim Action, and Contingency Remedy RODs*.

Module Summary

- **Removal Actions and Expedited Remedial Actions are tools which can be used in quick response or emergency situations**
- **The three types of removal actions include:**
  - **Emergency responses**
  - **Time-critical responses**
  - **Non-time critical responses**
- **The Decommissioning policy under CERCLA authorizes DOE to evaluate, select and implement removal actions that the DOE determines are necessary**

15

Module Summary (con't)

- The two types of remedial actions are
  - Expedited action or early actions
  - Interim actions
- The removal and expedited remedial actions may be interim or final, but they must, to the extent practicable, contribute to the efficient performance of any long term remedial action for the release.

Exercise 2
Removal Actions, Interim Actions, and Expedited Actions: A Case Study

- **Exercise Objective:**
  - **Provide practice on how to apply removal and interim actions at a hypothetical site**